

## WATER QUALITY MANAGEMENT OF HIGHWAY RUNOFF Instructor-Led

In reaction to the impact of human activity on water quality, the Clean Water Act (CWA) was passed in 1972 in order to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The act regulates discharges to U.S. waters through permits issued under the National Pollution Discharge Elimination System (NPDES) permitting program and places requirements on State transportation agencies for managing runoff water quality. Understanding the legal responsibilities, terminology, and the general roles of players in the regulatory process is critical in order to properly plan for, budget, and implement water quality management.

The intent of this course is to provide a basic understanding of water quality parameters, processes, requirements, and best management practices (BMPs) in order to provide the transportation community with guidance on how to mitigate impacts and protect water quality. This course shares approaches and technologies for the water quality management of highway stormwater runoff, including the effective maintenance, inspection, and performance evaluation of BMPs.

**OUTCOMES:** Upon completion of the course, participants will be able to:

- Identify and characterize the quantity and quality of highway runoff
- Describe how highway runoff can affect ecosystems
- List major Federal requirements that apply to management of highway runoff
- Explain how to select a mitigation strategy from a watershed perspective
- Describe design concepts and considerations in selecting and siting appropriate BMPs for controlling highway runoff
- Develop conceptual designs for various BMPs considering treatment targets, design requirements, BMP performance goals, siting and maintenance considerations, etc.
- Explain how to integrate mitigation of highway runoff impacts into the project development process
- Discuss the importance of BMP inspection, performance evaluation, monitoring, and maintenance

**TARGET AUDIENCE:** This course is designed for State department of transportation staff who negotiate permit conditions with the appropriate State agency; design engineers who must be cognizant of permit requirements; construction personnel who implement the highway designs; inspectors who ensure that water quality management features (BMPs) are functioning as designed; biologists who identify habitat for wildlife and potential ecosystem impacts; landscape architects and botanists who ensure that vegetation is preserved to the maximum extent practicable and that appropriate vegetation is used to provide water quality benefits after construction; and environmental scientists who monitor and evaluate water quality.

**LENGTH:** 2 days

**CEU:** 1.2 Units

**FEE:** \$270 per participant

**CLASS SIZE:** Minimum: 20; Maximum: 30

**REGISTRATION:** To host a session of an NHI course, complete the "On-Site Course Request" form (FHWA 1530) and submit to NHI via <http://www.nhi.fhwa.dot.gov>. After the form is received, an instructor will contact the local coordinator to schedule the session. Requested dates may be shown on the form; however, scheduling is subject to instructor availability. All confirmed sessions are listed on the NHI Web site by date and course number.

**NHI Training Team:** NHI Training Coordinator • (703) 235-0534 • E-mail [nhitraining@fhwa.dot.gov](mailto:nhitraining@fhwa.dot.gov)

**NHI Training Program Manager:** Mila Plosky • (703) 235-0527 • E-mail [mila.plosky@fhwa.dot.gov](mailto:mila.plosky@fhwa.dot.gov)

**Technical Information:** Patricia Czenas • (202) 366-4085 • [patricia.czenas@fhwa.dot.gov](mailto:patricia.czenas@fhwa.dot.gov)

This newly developed course focuses on compliance with the National Pollution Discharge Elimination System (NPDES) permitting program, as well as other regulatory requirements.



NATIONAL HIGHWAY INSTITUTE